



Transportation Synthesis Report

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Corridor Management

Prepared for
**Bureau of Equity and Environmental Services
Division of Transportation Infrastructure Development**

Prepared by
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Transportation Synthesis Reports (TSRs) are brief summaries of currently available information on topics of interest to WisDOT technical staff in highway development, construction and operations. Online and print sources include NCHRP and other TRB programs, AASHTO, the research and practices of other state DOTs, and related academic and industry research. Internet hyperlinks in TSRs are active at the time of publication, but changes on the host server can make them obsolete.

REQUEST FOR REPORT

A Corridor Management Workgroup at WisDOT has been developing a corridor management plan over the last two years. Their next step is to form three committees to look at tools for implementation, public participation in the process, and how to make the financial end of the plan work—how the planning activities can be linked with project dollars. The goal is to insert planning into the whole project process, looking at development statewide rather than simply addressing facility needs on a case-by-case basis. The focus is on vision, preservation and collaboration among all those involved in designing, building and maintaining the highways. RD&T was asked to identify examples of how other states are developing and implementing corridor management plans.

SUMMARY

There is a patchwork of federal and especially state-initiated policies addressing statewide corridor management policy. Our research has uncovered two states in particular—Florida and Kansas—that have developed a comprehensive corridor management policy that can serve as a blueprint for Wisconsin's efforts. Other state and federal documents provide additional context for certain aspects of corridor management. Determining which portions of these documents are applicable to Wisconsin will depend largely on how corridor management is defined, including the budgetary and legislative environment that both empowers and constrains the ability to perform comprehensive corridor management.

Following is a summary of the most recent research that relates to developing and implementing national and state corridor management policy. Several of these studies include case studies and specific examples of how other states are handling corridor management. We follow with some industry efforts in the area of corridor management from ITS, Byways, and Freight Corridors. Finally, we point to efforts in progress that should provide additional federal guidance.

Federal **NCHRP**

Synthesis Report 337: Cooperative Agreements for Corridor Management, NCHRP Project 20-5, Topic 34-07, 2004.

http://gulliver.trb.org/publications/nchrp/nchrp_syn_337.pdf

This synthesis summarizes the current state of nationwide corridor management principles and success stories. The report outlines:

- **Cooperative tools** including state resolutions recognizing corridor jurisdictions, memorandums of understanding, intergovernmental agreements, and public-private agreements.
- **Elements of corridor management agreements** that include a template for specifying who, why, and for how long a corridor agreement will be valid, as well as outlining funding and financial arrangements.

- **Successful case studies** and lessons learned for a variety of corridors from across the country.
- **Guidance for developing effective agreements** for agencies looking to build a corridor planning and operations model.

This report builds on the principles of **NCHRP Synthesis Report 289: Corridor Management (2000)**. This synthesis report provides a broad examination of state policies and programs, techniques applied, coordination issues, and successful case studies. This document is not available in PDF format. This and other NCHRP synthesis reports are available in hard copy at the WisDOT library.

FHWA

Work Zone Operations Best Practice Guidebook, FHWA Publication No. FHWA-OP-00-010, April 2000.
<http://ops.fhwa.dot.gov/wz/practices/best/Documents/workzoneguidebook.pdf>

FHWA's Workzones Best Practices Guidebook highlights several state **work zone management** techniques to improve corridor operations:

- CalTrans utilizes innovative construction and maintenance coordination techniques within a corridor construction concept. This has led to a reduction in the overall congestion and delay to the traveling public as well as improved public perception of the construction and planning coordination efforts by the State DOT.
Contact: Randy Iwasaki, Deputy Director, (916) 654-6823
- Indiana reviews traffic along an entire corridor and upgrades its traffic carrying capacity on both mainline and alternate routes. Before corridor construction begins, they conduct an analysis on the likely routes to be used in the corridor by traffic that cannot be accommodated on roads under construction.
Contact: Ed Ratulowski, FHWA Design Engineer, (317) 226-7342
- Michigan—especially in the Detroit area—is practicing a “rip the band-aid” approach by identifying and performing needed construction work in a corridor. According to FHWA, “a typical implementation is for MDOT to allow a total weekend closure within a long-term contract project and invite road maintenance, utility, and survey forces to also work on their road interests during that time period.”
Contacts: Tom Fort, Michigan FHWA, (517) 377-1880 Ext 42
Ernie Savas, MDOT, (248) 483-5142
- Virginia's I-81 Steering Committee oversees ten different study area and consultant contracts to “ensure quality and consistency of design, consistency of traffic data collection and projections, open channels of communication, public involvement, and financial responsibility” for this very vital high-speed, high-volume statewide corridor.
Contact: Jimmy Mills, Division Administrator, (804) 786-2507

Transportation Corridor Preservation: A Survey of State Government Current Practices, FHWA, May 2000
http://www.fhwa.dot.gov/realestate/cp_state.htm

This study surveys the legislative, budgetary, and implementation tools and practices for 35 states in the context of corridor preservation. FHWA defines corridor preservation as “to any techniques that state and local governments use to protect existing transportation corridors or planned corridors from inconsistent development, in an effort to minimize negative environmental, social, or economic impacts.” It divides states into three categories:

- Formal state program (Wisconsin and 14 others)
- Informal state program
- Limited state program

State

Florida

Effective Strategies for Corridor Management, Center for Urban Transportation Research, October 2004.
http://www.dot.state.fl.us/research-center/Completed_Proj/Summary_PL/FDOT_BD544_06_rpt-web.pdf

Florida has established itself as a leader in a variety of corridor management practices. This document outlines **practical corridor management strategies, case studies, and funding opportunities** for application beyond Florida. The document also highlights the legislative context that corridor management has in Florida via Rule 14-997.004(5), which empowers FDOT to develop and implement corridor management plans.

Florida's legislative rules regarding corridor management also specify a **public participation** process for creating the corridor plan. The DOT, communities, and property owners are quickly seeing this strategy as an effective way to reduce traffic congestion, improve safety, and maximize road capacity. Other highlights of this study include:

- Intergovernmental coordination
- Implementation techniques
- Funding strategies

Kansas

Corridor Management Policy, Kansas Department of Transportation, 2003.

<http://www.ksdot.org/BurTrafficEng/cmpworking/cmpindex.asp>

Since 1997, Kansas' Corridor Management efforts have sought to more effectively manage the interaction between land use and transportation. This program, called Corridor Management, contains several tools that are new to Kansas. Their achievements include:

- Access to the state highway system is now governed by engineering standards rather than previous guidelines that were in place before. These standards represent minimums that require preparation of a variance for any exceptions.
- Access spacing standards now reflect functional hierarchy in highway classification.
- Establishing procedures for advance acquisition of right of way.
- All six districts now have their own corridor management plan identifying high growth corridors and outlining the partnering process with cities and counties.

Colorado

2030 Transportation Plan Southeast Transportation Planning Region, prepared by Kirkham Michael Consulting Engineers for the Southeast Colorado Enterprise Development, 2004.

<http://www.seced.net/transportation/chapt4.pdf>

Colorado's Southeast Transportation Planning Region's 2030 plan directly spells out that state's commitment to shift from prioritized project lists to a **Corridor Vision Approach**. It analyzes corridors using primary and secondary investment categories, and describes the planning process utilized for corridor visioning. It also matches these visions to approved investment categories and Colorado Transportation Commission policies.

New Mexico

Accelerated Highway Construction—Workshop Series Summary. NCHRP Transportation Research Circular, vol. E-C059, December 2003.

<http://trb.org/publications/circulars/ec059.pdf>

This primer on Accelerated Highway Construction points to New Mexico as a model for using corridor management to expedite construction and "better address a more complete restoration strategy and can reduce the overall number of work zones that may be required to complete the activities."

The four components to New Mexico's corridor improvement technique are to:

- Obtain adequate and creative **funding**,
- Develop **innovative contractual documents**,
- **Involve the public** fully and completely throughout the process, and
- **Organize and stage the work** so that there is a pronounced reduction in "orange barrels" during construction and into the future. (Lucas, 5).

Iowa

Corridor Management Pilot Projects. Center for Transportation Research and Engineering, Iowa State University, 2004.

http://www.ctre.iastate.edu/reports/corridor_mgmt.pdf

Iowa State University's Center for Transportation Research (CTRE) provides an in-depth examination of **access management** techniques and their application to several Iowa highway corridors. It describes the application of access management principles as an analytical process of balancing the competing needs of traffic service, safety, and support for land development. It describes the application of these principles to two pilot corridors, and makes recommendations for subsequent application statewide.

Minnesota

Interregional Corridors: Prioritizing and Managing Critical Connections Between Minnesota's Economic Centers. Transportation Research Record No. 1817, pp. 79-87, 2002.

<http://trisonline.bts.gov/detail.cfm?ANNUMBER=00936222&STARTROW=1&CFID=1382380&CFTOKEN=66500075>

Minnesota has developed an interregional corridor system with the goal of ensuring safe, efficient, and reliable travel among regional trade centers. This article describes performance expectations, and principles and policies for managing and guiding development along these corridors are described. The above link provides an abstract, with the full article available in the WisDOT library.

Industry

Freight

Several nationwide interstate **freight corridor studies** aim to reduce impediments to freight flow and safety, and evaluate strategies for facilitating freight flow within the corridor. Two in particular—the I-10 and Upper Midwest Freight Corridor Studies—focus on identifying common freight operation and interjurisdictional issues through multi-state corridors.

I-10 Freight Corridor Study

www.i10freightstudy.org

The I-10 National Freight Corridor Study provides study reports for all eight participatory states, as well as a variety of technical memos tackling such disparate multi-state issues as **improvement scenario evaluation** and **ITS planning and implementation**.

Upper Midwest Freight Corridor Study

<http://www.uppermidwestfreight.org/components.html>

The Upper Midwest Freight Corridor Study brings eight states together in critical component issues. The administrative issues component focuses on “**size and weight regulations, hazardous material transportation, and...ITS projects**,” while the best practices component addresses funding and decision-making processes. A draft report and more specific information is available at the above website.

ITS

<http://www.itsa.org/icm.html>

<http://www.its.dot.gov/initiatives/initiative5.htm>

ITS America's “Integrated Corridor Management Program” examines the benefits and planning for ITS from a corridor perspective. Tools include:

- Integrated Corridor Visioning
- Integrated Corridor Management Systems
- Corridor Management Program Plan
- Major Initiative Scheduling

Byways

<http://www.bywaysonline.org/program/topics/4/>

Another popular approach is to integrate corridor management into a scenic byways program. This approach allows DOTs and local jurisdictions to test many of the corridor management principles with a clearer, more accessible agenda of preserving scenery and natural beauty. Some of the more appropriate cases available from Byways include:

- #2: Design and Maintenance for Byways
- #7: Managing Growth and Development
- #10: Public Involvement
- #11: Action Plans – Putting Your Byway in Gear
- Assessing Best Practices - Colorado
- Any number of nationwide case studies

Research in Progress

NCHRP

Synthesis of Information Related to Highway Problems:

Topic 34-07, Agreements Between Governmental Entities to Manage Arterial Corridors to Preserve Mobility and Safety

<http://rip.trb.org/browse/dproject.asp?n=7465>

Topic 35-06, Access Rights

<http://rip.trb.org/browse/dproject.asp?n=8644>

As part of a broader NCHRP study, these two reports will add to the federal library of practices for specific corridor management issues. Topic 34-07 will be a synthesis of cooperative state/local agreements to manage transportation corridors, including access controls and land development. Topic 35-06 documents best practices and lessons learned in acquiring access rights for highway and corridor management and preservation. This NCHRP synthesis is due to be released in 2005.